

THE PROPOSED BRIDGE OVER THE
TYNE AT NEWCASTLE.

We glean from the *Newcastle Journal*, that the site of the proposed bridge is already well known. It will extend from the Castle Garth to the high ground on the south side of the river. There will be two roadways, one on a level with the Castle Garth, for carriages and foot passengers, and the other at an elevation of 22 feet above it, with three lines of railway, for locomotives. The carriage road will be 1,380 feet in length, on a straight line, and the locomotive way will be immediately above, with the exception of a space at each end, the locomotive line diverging at a point about 270 feet from each end, to the west on the north side, to run into the general station to be built at the North, and to the east on the south side, to form a junction with the main line southward. These diverging portions of the locomotive way will be supported on handsome colonnades, each consisting of 20 metal pillars, which will give to the entire structure a magnificent finish. The bridge itself will consist of six river arches, with four land arches on each side, the former 124 feet 10 inches, and the latter 36 feet 3 inches span, the land arches diminishing in altitude from the foundation upwards, corresponding with the declivities of the river basin.

These arches will be supported on piers of solid stone masonry, and will be constructed of cast-iron. The piers will be 48 feet by 16 feet 6 inches in thickness, and in extreme height about 131 feet from the foundation, having an opening in the centre through each, so that, to the spectator at a distance, the bridge will appear to rest on pillars, and will present nothing of that massive character which might be expected in a structure of such gigantic proportions. These piers will be built on piles piercing the bed of the river about 50 feet on the north side, and about 20 feet on the south side. The roadway for carriages and foot passengers will be 35 feet above the level of high-water mark, suspended by rods from cast-iron arches, springing from the piers at the carriage road level, and the railroad will rest on the crowns of these arches, being supported also by stays from the arches at points of the space between each suspender. The stays and suspending rods will be surrounded by a covering of metal, to take off the wiry appearance they would otherwise present, and make them harmonize with the general proportions of the structure.

HEMEL HEMPSTEAD CHURCH.

Sir,—A few weeks ago I had the pleasure of visiting the old Norman church at Hemel Hempstead, Herts, which for several reasons is well worthy of notice. The whole of the original Norman plan being still extant, it makes a good model for a parish church. The plan of the church is cruciform, consisting of a chancel 37 feet long by 16 feet wide; a nave about 72 feet long by 22 feet wide; aisles 11 feet wide, and transepts about 30 feet long by 20 feet wide each. The chancel is divided into two bays by a groined roof of stone, the intersecting ribs of which meet, with no boss. The nave is divided into six bays by semi-circular arches springing from circular piers. The arch mouldings are not the same in every bay, the arches being decorated with different combinations of the zig-zag and alternate billet in some, and in others with continuous mouldings. The capitals of the piers also vary in design, and in all the arches, only the nave face is enriched; the aisle face being in section merely a rectangular nook, or as Mr. Puley defines it in his "Manual of Gothic Mouldings," a plain arch of two orders. The clerestory windows are semi-circular headed, with a bowtell moulding, carried by a jamb-shaft in the rectangular nook of the jamb, and an internal string-course runs under them. A fine west doorway exists, and also a Norman tower at the intersection of the cross. The tower has a circular belfry turret at the south-east angle, a wooden octagonal spire covered with lead crowns the tower; though its great height and later design than the rest of the tower take away from the Norman character of the building, yet its graceful proportion makes up for the fault; the outline of its framing is thus: four beams or rafters spring from braced girders stretching across the

tower; these scarfed beams or rafters about 8 in. by 7 in. meet in a point about 12 feet from the top of the spire, from which point one beam takes their place to the top. They are well braced together, and carry diagonal stays, which stays are on each of the four faces of this framing, and are continued till they meet the right angles of the faces of the spire. These diagonal stays are continually repeated, serving to tie the faces of the octagonal spire to the central four principal beams, thus the whole spire is framed together as it were into one mass.

The above is only a general description, as drawings would be required to make the construction quite clear. Most of the windows, but the clerestory ones, are of perpendicular character, and the whole church is spoilt by high seats and galleries; the builders of which last have actually cut away part of the capitals of the piers, and neatly rounded them into a sort of flat oval, to prevent, I suppose, their original form incommode the worshippers in the gallery, who here, it appears, improved upon this example of destruction by defacing them still more. So much for the moral effect of screening off by the spandrels of a low semi-circular arch, a space for the free sittings.

The church has lately undergone partial external repair; but the galleries, high pews, and flat ceilings call loudly for the work of restoration to go on.—I remain, Sir, yours, &c.,
March 9th. J. G. S.

LIST OF NEW PATENTS

RELATIVE TO ARCHITECTURE, ENGINEERING, &c.
GRANTED FOR ENGLAND.

Published by Mr. A. Prince, of the Office for Patents of Inventions, Lincoln's Inn Fields, London.
[SEE MONTHS FOR REFERENCE.]

Henry Highton, of Rugby, Warwick, master of arts, for improvements in electric telegraphs. Feb. 3.

Thomas Foxhall Griffiths, of Wolverhampton, for improvements in stamping and shaping sheet metals. Feb. 3.

William Garnett Taylor, of Halliwell, Lancashire, cotton-spinner, and William Taylor, of Halliwell, aforesaid, labourer, for improvements in consuming smoke and economising fuel. Feb. 3.

James Palmer Budd, of Yatalyfer, Iron Works, Swansea, merchant, for improvements in the manufacture of iron. Feb. 11.

John Keating, of North Mews, Fitzroy-square, Middlesex, scagliollet, for certain improvements in the manufacture of cement. Feb. 11.

Andrew Smith, of Princes-street, Middlesex engineer, for improvements in coating or covering metals for the purpose of preventing oxidation. Feb. 11.

James Murdoch, of Staple-inn, Middlesex, mechanical draughtsman, for an improved process for preparing a certain material for the purpose of painting. Feb. 11.

John Brocklehurst, of Holborn, Middlesex, lamp-manufacturer, for improvements in the hanging and disconnecting of window-sashes and frames. Feb. 11.

James Nasmyth, of Arundel-street, Middlesex, gent., for certain improvements in engines or machines for obtaining and applying motive power. Feb. 16.

Joseph Clinton Robertson, of 166, Fleet-street, London, civil engineer, for improvements in nail-making machinery. Feb. 18.

John Maddock, of Burslem, Stafford, earthenware manufacturer, for a new and improved method of building and constructing kilns and ovens used by potters and manufacturers of china and earthenware. Feb. 25.

Antonio James Mayer, of Ashley-crescent, City-road, for improvements in certain wood-cutting machines. Feb. 25.

Thomas Pemberton, jun., of Birmingham, manufacturer, for a new or improved method or methods of ornamenting window furniture and articles of upholstery in general. Feb. 25.

John Samuel Templeton, of Sussex-place, Kensington, artist, for improvements in propelling carriages on railways, and improvements to propelling vessels. Feb. 27.

Jews' ORPHAN ASYLUM.—The foundation stone of this building, to be erected in Leman-street, Goodman's-fields, was laid yesterday week by the chief rabbi:

New Books.

A Companion to the Fourth Edition of a Glossary of Terms used in Ureian, Roman, Italian, and Gothic Architecture. Oxford: John Henry Parker. 1846.

THIS Oxford Glossary, first published in a small and unpretending form in 1836, has gathered strength in each succeeding edition, and now presents such an amount of information condensed and classified, as can be found nowhere else, and renders it indispensably necessary for every person studying the architecture of the middle ages.

The first edition, according to the preface, laid no claim to originality, "its sole object being utility. The best authorities were consulted, and freely made use of, frequently in their own words;" information from any quarter was thankfully received, and in succeeding editions the same system was pursued. Ingram, Whewell, Willis, Bloxam, Blome, Twopenny, Hussey, and others, have contributed to render the work complete; and Mr. Parker (perhaps without anticipating it in the first instance), is thus raising a personal monument which can hardly fail to be permanent.

The volume before us is a very important addition to the work. In 1840, the copperplates and copyright of Mr. Britton's valuable "Dictionary of the Architecture of the Middle Ages," were sold by auction, and came into the hands of the owner of the "Glossary." On consideration, he determined upon publishing it as a companion to his own, extracting only so much as suited his object, rather than reprinting the whole as a separate work, which must in a degree have clashed with it. And this, therefore, forms a great part of the present volume. In addition to this, however, is a chronological table, illustrative of the rise and progress of Gothic architecture, especially in England, commencing A.D. 284, "Palace of Diocletian, at Spalatro, and ending A.D. 1538, "The old Hotel de Ville of Caen, Normandy, built." The table gives the precise dates of more than 200 buildings, a series of copies of inscriptions recording the dates of edifices, and the heads of the different kings and queens, with their respective shields and badges: a general index to the three volumes has likewise been added, so that the "Companion" is indispensable even to those who possess Mr. Britton's dictionary in its perfect shape.

Correspondence.

IRON STORY-POSTS.

Sir,—A few days since, a fire occurred at a house on Ludgate-hill, near Ave Maria-lane. A portion of the back-front, which is three stories high, is supported by a timber breast-summer, and a 2-inch square wrought-iron story-post in the middle of it. The breast-summer and other parts are severely scorched only, and now standing, and the great heat has caused a deflection of $5\frac{1}{2}$ inches in the middle of the iron column, which is 8 feet 4 in. long, and is now standing without sustaining any weight.

Can any of your readers inform me, what the probable result would have been if the story-post had been of $3\frac{1}{2}$ inch cast-iron?

A. B.

A HINT TO BUILDING COMMITTEES.

Sir,—I have frequently observed in your valuable journal, that certain rewards have been offered to those architects who will forward the best plan to suit the purpose of the several committees who are about to erect new and public buildings. Now, it is well known that a knowledge of the profession is only acquired by close application and expense; it is also admitted in every society that the labourer is worthy of his hire. Applying a short time since for particulars of a building about to be erected in the neighbourhood of Lancaster, to my great surprise I found the building was to cost about 10,000*l.* or 12,000*l.*, and for all his exertion the architect was only to receive 50*l.*, providing his plans were approved by the committee. I should think that these terms will not induce my professional brethren to spend their days for so inadequate a sum to what the cost will be for the erection. You will observe the policy of such committees; they obtain the best of talent for about a fourth part of the proper charge for designs. I hope